

serviceable upon this side of the ocean, but would be especially welcome to investigators in other countries. Commercial publishers are willing to undertake the financial management of such serials abroad, but here probably the only way to succeed would be to have the responsibility assumed by a university having a reputation and endowment that would guarantee permanency. It is very doubtful if the income from subscriptions would meet the expense of publication.

If such a serial were established, there would still remain the necessity for an index of earlier publications. Among the various ways in which this might be accomplished, probably one of the most effective would be by co-operation through the section of botany in the American Association. It could by this means be managed so as not to be a formidable undertaking. The expense of the printing might possibly be arranged for with the Association, or the Smithsonian Institution.

The sooner the work is done the shorter the task, and the more rapid and satisfactory will be the growth of botanical science upon American soil. That it must eventually be done does not admit of doubt.

## CURRENT LITERATURE.

### Classification of monocotyledons.

A recent monograph by Dr. A. Engler<sup>1</sup> will be found especially helpful to those interested in the classification of angiosperms. It will be seen that the author's arrangement of the monocotyledons differs considerably from that of Eichler, which, with slight modification, is repeated by Goebel, and also from that of Drude. Engler divides the monocotyledons into two great divisions: (1) Those with prevailing inconstancy in the number of parts of the flower, and (2) those with complete or reduced pentacyclic flowers.

The first division includes those families in which the typical nakedness of the flower, spiral arrangement, and inconstancy in the number of parts of the flower may be observed. The arrangement is easily understood, and seems to be sustained by the facts. The different series and their families are as follows:

A. Families with a prevailing inconstancy in the number of floral parts.

I. *Pandanales*.—(Pandaceæ, Typhaceæ, Sparganiaceæ.)

<sup>1</sup>ENGLE, A.—Die systematische Anordnung der Monokotyledoneen Angiospermen. Akademie der Wissenschaften. pp. 1-55. Berlin, 1892.



II. *Helobiae*.—The common characteristic of this series (Triuridaceæ excepted) is that the small endosperm is destroyed by the embryo before germination. (Juncaginiaceæ, Butomaceæ, Hydrocharidaceæ, Potamogetonaceæ, Naiadaceæ, Aponogetonaceæ, Triuridaceæ.)

III. *Glumifloræ*.—(Cyperaceæ, Gramineæ.)

IV. *Principes*.—(Palmæ.)

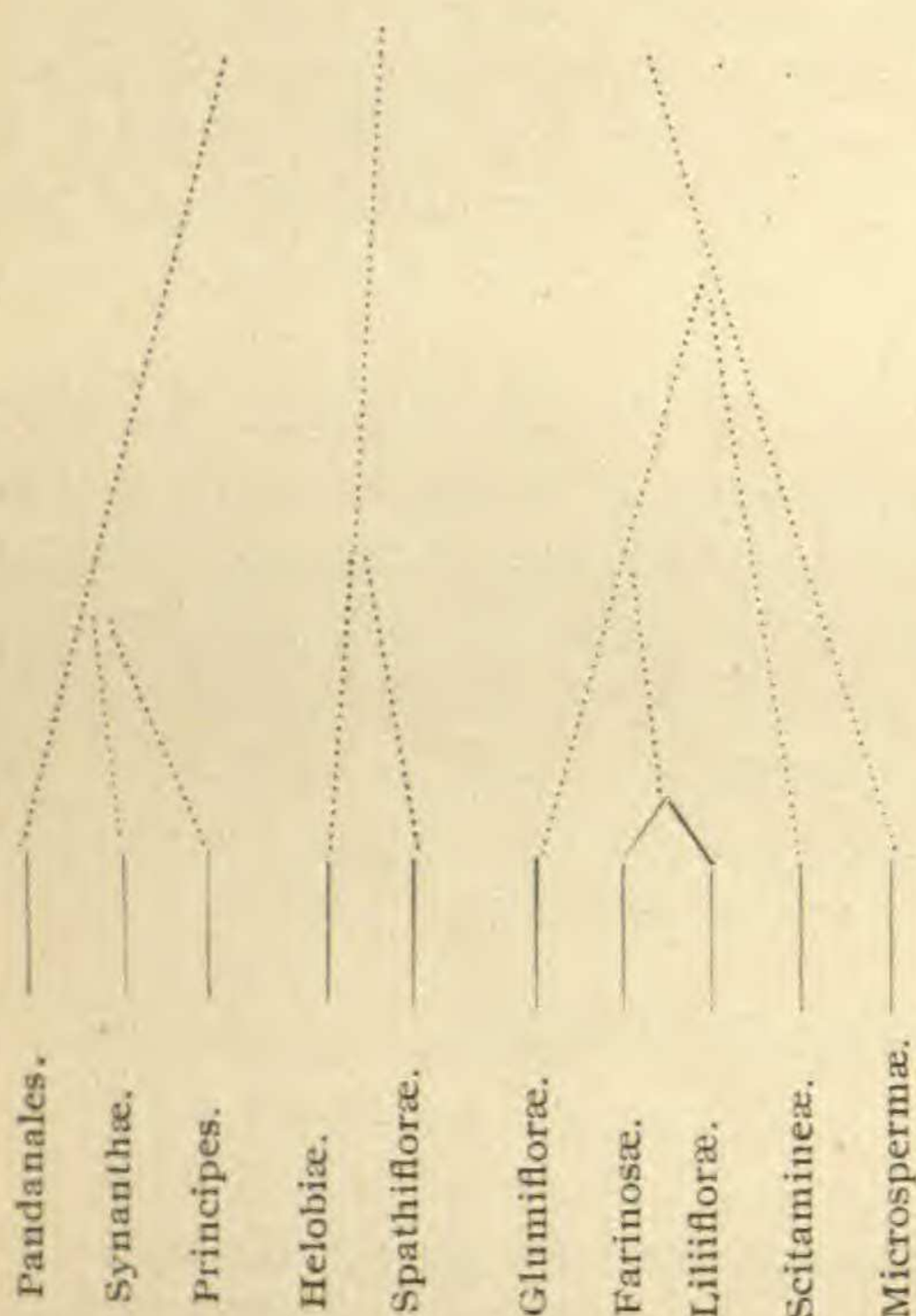
V. *Synanthæ*.—(Cyclanthaceæ.)

VI. *Spathifloræ*.—(Araceæ, Lemnaceæ.)

B. Families with complete or reduced pentacyclic flowers.

VII. *Farinosæ*.—The important characteristic of this group (aside from exceptions which are explained) is the distinct mealy endosperm whose cells have thin walls and are filled with connected starch grains. (Flagellariaceæ, Restionaceæ, Centrolepidaceæ, Mayaceæ, Xyridaceæ, Eriocaulaceæ, Rap-taceæ, Bromeliaceæ, Commelinaceæ, Pontederiaceæ, Philydraceæ.)

VIII. *Liliifloræ*.—Endosperm mostly of thick-walled cells, containing only protoplasm and oil. (Juncaceæ, Ste-monaceæ, Liliaceæ. Hemod-oraceæ, Velloziaceæ, Taccaceæ, Dioscoreaceæ, Iridaceæ.)



IX. *Scitamineæ*.—(Musæ, Zingiberaceæ, Canneæ, Maranteæ.)

X. *Microspermae*.—(Orchidaceæ, Apostasiæ, Burmaniaceæ.)

The accompanying diagram will serve to give a general view of the series of monocotyledons according to their mutual relationships.

D. M. MOTTIER

### Minor Notices.

THE NORTH AMERICAN species of *Lespedeza* form the subject of the 34th contribution from the Herbarium of Columbia College, which appears in *Trans. N. Y. Acad.* XII, under the authorship of N. L. Britton. Twelve species are recognized, full descriptions and synonymy given, and two new varieties proposed. The delimitation of these species has always been a troublesome thing, and as Dr. Britton has had the opportunity of examining most of the type specimens it is to be hoped that the "straightening out" has been effectual.



THE SECOND and enlarged edition has reached us of a compact and handy little flora of the East Frisian islands,<sup>1</sup> which lie like a barrier off the coast of Holland and East Friesland. After a brief account of the flora, suitable keys to the families of angiosperms are followed by concise description of the species. We should be glad to see some such floras of parts of this country.

## NOTES AND NEWS.

AN INTERESTING account of the Ray herbarium is given by Mr. James Britton in the *Journal of Botany* for April.

REV. ARTHUR C. WAGHORNE, of Newfoundland, is offering sets of Newfoundland and Labrador plants for sale. The plants are authoritatively named and include cryptogamic material. His address is at New Harbor.

BULLETINS 31-40, of the Botanical Department of Jamaica, in addition to much useful information concerning matters that directly pertain to the Public Gardens and Plantations, contain a continuation of the synoptical list of the Ferns of Jamaica, by Superintendent Jenman, including descriptions of new species.

DR. KARL PRANTL'S work in the preparation of the great "Natürlichen Pflanzenfamilien" will be continued by Dr. Engler alone. Parts 80 and 81 of this work, just issued, contain Rhizophoraceæ by Schimper, Myrtaceæ by Niedenzu, Sterculiaceæ by Schumann, Dilleniaceæ and Ochnaceæ by Gilg, and Eucryphiaceæ by Focke.

THE GAZETTE would be glad to give the names and addresses of all botanists who are to be at the World's Fair in charge of exhibits, so that visiting botanists may readily find them. The form of announcement will be as follows:

DR. CHARLES F. MILLSPAUGH: in charge of West Virginia Forestry Exhibit: intersection main aisles, Forestry Building.

THE SECOND publication of the Botanical Survey of Nebraska, which is being conducted by the Botanical Seminar of the State University, makes a report on collections made in 1892. It includes notes and lists of plants from the Sand Hill region of Sheridan and Cherry counties, notes on the cañon flora of Sioux county, and miscellaneous additions to the state flora, together with new or noteworthy species.

A BIOGRAPHICAL sketch of the late Dr. J. S. Newberry, prepared by Dr. N. L. Britton, appears in the *Bulletin of the Torrey Botanical Club* for March, including a fine portrait and full bibliography of his botanical writings. A plate of Torrey's genus *Newberrya* is also given. The sketch is written by one of Dr. Newberry's associates, who had abund-

<sup>1</sup>BOCHENAU, FRANZ:—Flora der Ostfriesischen Inseln. 12mo. pp. viii, 176. Norden u. Norderney; H. Braams. 1891.